9th CLASS PHYSICS GUESS PAPER NEW SCHEME. 2023.

ALL PUNJAB: Lahore, Gujranwala, Multan, Bahawalpur, Sargodha, Azad Kashmir Dera Ghazi Khan.

UNIT NO. 1 PHYSICAL QUANTITIES AND MEASUREMENT.

KNOWLEDGE BASE QUESTIONS.50%.

1. Define Physics and branches of physics.
2. Define atomic physics and Nuclear Physics.
3. Define Plasma Physics and Geo physics.
4. Define Physical quantities and derives quantities.
5. Define base and derived quantities.
6. What is meant by base unit? Give two examples.
7. What do you know about prefixes?
8. How numbers are expressed in Scientific Notation.
9. Define zero error and zero correction.
10. Difference between Positive zero error and negative zero error.
11. When the zero error of a screw gauge will be positive.

UNDERSTANDING BASED QUESTIONS. 35%

1. When the zero error of screw guage will be positive?
2. Why a screw guage measures more accurately than vernier calipers?
3. Why do we use zero correction?
4. How many divisions are there on its vernier scale?

APPLICATION BASED QUESTIONS. 15%

1. On what pan we place the object and why?
2. What is the pitch of your laboratory screw gauge?
3. Which one of the two instruments is more precise and why?

LONG QUESTIONS.

1. Difference between Base Quantities and Derived Quantities.

PROBLEMS: 1.3 , 1.10

CHAPTER NO. 2 KINEMATICS.

KNOWLEDGE BASED QUESTIONS. 50%

1. Difference between Kinematics and Dynamics?
2. What is translator motion and linear motion?
3. Define random motion. Give example.
4. Difference between rotatory and vibratory motion.
5. Define motion and types of motion.
6. Difference between rotator and random motion.
7. Define vibratory motion and give example.
8. Difference between Scalars and Vectors
9. Define Uniform speed and non-uniform speed.
10. Difference between speed and velocity.
11. Convert 1 kmh-1 speed of a body into ms-1
12. Is velocity –time graphing a straight line?

UNDERSTANDING BASED QUESTIONS. 35%

1. Which is the fastest animal on the Earth?
2. When a body is thrown vertically upward, its velocity at the highest point is zero. Why?
3. What is the use of LIDAR gun?

APPLICATION BASED QUESTIONS .15%

1. Why vector quantities cannot be added and subtracted like scalar quantities?
2. How do riders in a Ferris wheel possess translator motion but not rotatory motion?

LONG QUESTIONS.

1. Define Scalar and vector quantities. Give two examples of each.

PROBLEM: 2.1,2.2, 2.3, 2.6

UNIT NO. 3 DYNAMICS

KNOWLEDGE BASED QUESTIOS.50%

1. Define momentum. Write its mathematical formula. Give its direction. Write its SI unit.
2. Define Inertia, explain with example.
3. State Newton's second law of motion.
4. Prove F = ma
5. Difference between mass and weight.
6. State and explain Newton's third law of motion.
7. How much force is needed to prevent a body of mass 10kg from falling?
8. Define Force and Momentum. Also write its mathematical formula.
9. Define friction. Write the value of co-efficient of friction between tyre and road.
10. Difference between sliding friction and rolling friction.
11. Write down two advantages and disadvantages of friction.
12. What is meant by co-efficient of friction? Write is mathematical formula.
13. Define centripetal force. Write its mathematical formula.
14. What is meant by centrifugal force? Write its equation.

UNDERSTANDING BASED QUESTIONS. 35%

1. How spring balance use.
2. How much force you need to prevent the book from falling?
3. Have you noticed why a moving balls stops?

APPLICATION BASED QUESTIONS.15%

1. Which shoe offer less friction?
2. Which shoe is better for jogging?
3. Which sole will wear out early?

LONG QUESTION.

1. Derive equations of motion.
2. Define momentum. Write its mathematical formula. What is its SI unit?
3. State and explain Newton's first law of motion. Why Newton's first law of motion is also called the law of inertia?
4. State Newton's second law of motion. Derive its mathematical formula. How you can define Newton using second law of motion.
5. State the law of conservation of momentum. Explain with examples.
6. Describe the methods to reduce friction.
7. Define Centripetal force and prove that Fc = mv2/r

PROBLEMS: 3.2, 3.4, 3.7, 3.8

UNIT NO. 4 TURNING EFFECT OF FORCES.

KNOWLEDGE BASED QUESTIONS.50%

1. Define parallel forces. Write the names of its types.
2. Define Like and unlike parallel forces.
3. What is meant by rectangular components?
4. What is meant by resolution of forces?
5. In a right angled triangle length of base is 4 cm and its perpendicular is 3 cm .Find length of hypotenuse.
6. Define rigid body.
7. Differentiate between axis of rotation and moment arm.
8. State the second condition of equilibrium. Write its mathematical formula.
9. Define unstable equilibrium. Give example.
10. Difference between unstable and neutral equilibrium with example.

UNDERSTNDING BASED QUESTIONS.35%

1. Can a small child play with a fat child on the seesaw? Explain how?
2. Two children are sitting on the see. Saw, such that they cannot swing. What is the not torque in this situation?
3. Why the height of vehicles is kept as low as possible?

APPLICATION BASED QUESTIONS.15%

1. A Ladder leaning at a wall is in equilibrium. How?
2. Does the speed of a ceiling fan go on increasing all the time?

LONG QUESTIONS.

1. State and explain resolution of forces in its rectangular components.
2. What do you mean by torque or moment of force? On what factors it depends upon?
3. Find the centre of gravity of an irregular shaped thin lamina with the help of plumb line.
4. What is a couple? Derive its mathematical relation.
5. Define equilibrium and explain is different state.
6. Define equilibrium and explain its condition.

PROBLEMS: 4.2, 4.5

UNIT NO. 5 GRAVITATION.

KNOWLEDGE BASED QUESTIONS.50%

1. Define law of gravitation.
2. Give the value and unit of 'G' in gravitational constant.
3. What is meant by gravitational field?
4. What is the relation between law of Gravitational and Newton's third of motion.
5. Write down the formula to find the mass of Earth.
6. Write the formula to find the mass of earth and writhe the mass of Earth.
7. Give two uses of artificial satellites.
8. What is satellite and geostationary satellite?
9. What is a communication satellite? Write down its height from the surface of earth.
10. Write the formula of orbital speed of artificial satellite.

UNDERSTANDING BASED QUESTIONS. 35%

1. Does an apple attract the Earth towards?
2. With what force an apple weighing 1 N attracts the Earth.
3. What is height of a geostationary satellite?
4. What is GPS system?

APPLICATION BASED QUESTIONS.15%

1. How Moon is nearly away from the Earth.
2. Does the weight of an apple increase? Decrease or remain constant when taken to the top of a mountain.

LONG QUESTIONS.

1. Explain the law of gravitation.
2. Why communication satellites are stationed at geostationary orbits.

PROBLEMS: 5.5 , 5.6,5.8, 5.10

UNIT NO .6 WORK AND ENERGY.

KNOWLEDGE BASED QUESTIONS.50%

1. What is the difference between work and energy?
2. Define kinetic energy and write its mathematical formula.
3. Define Potential energy and write its equation.
4. Difference between mechanical energy and chemical energy.
5. What is meant by nuclear energy?
6. What is soil erosion?
7. Write down the two disadvantages of fossil fuels.
8. Define fission reaction.

9. What is meant by geothermal energy?
10. What is meant by energy from biomass?
11. Write Mass- Energy equation. Also write the value of speed of light.
12. What is meant by Power? Write its formula.
13. What is meant by the efficiency of a system?

UNDERSTANDING BASED QUESTIONS.35%

1. How a nuclear power plant uses.
2. What is watt?

LONG QUESTIONS.

1. Define K.E. and drive its relation.

PROBLEMS: 6.1,6.3, 6.4, 6.6, 6.8, 6.9

UNIT NO. 7 PROPERTIS OF MATTER.

KNOWLEDGE BASED QUESTIONS.50%

1. Write the properties of kinetic molecular model of matter.
2. What is meant by plasma state of matter?
3. Describe some properties of Plasma.
4. What is the SI unit of pressure? Define it.
5. What is atmospheric pressure?
6. State Pascal's law.
7. Explain the working of hydraulic press.
8. What is Hooke's law? What is meant by elastic limit?
9. What is meant by mercury barometer?
10. What is Young's Modulus and mathematical form?
11. State Archimedes principle.
12. What is difference between stress and strain?

UNDERSTANDING BASED QUESTIONS.35%

1. Why the air become thinner and thinner as we go up?
2. What changes area expected in weather if the barometer reading shows sudden decrease?
3. On what principle, ships and submarines float on surface of water and why?
4. A wooden block floats on water. Why?

APPLICATION BASED QUESTIONS.15%

1. Can we use a hydrometer to measure the density of milk?
2. Principle of floatation?

LONG QUESTIONS.

1. How kinetic molecular model of matter is helpful in differentiating various states of matter?
2. Explain the working of hydraulic press.
3. How can we calculate the density of a object by using Archimedes principle?
4. Define Young's Modulus. Derived the formula and write the unit.

PROBLEMS: 7.1 , 7.2, 7.4, 7.5,7.6,

UNIT NO. 8 THERMAL PROPERTIES OF MATTER.

KNOWLEDGE BASED QUESTIONS.

1. Write two scale of temperature.
2. Define Fahrenheit scale of temperature.
3. Write the formula of conversions form Celsius to Kelving scale.
4. What is absolute zero?
5. What is clinical thermometer and its range?
6. Convert 100 oF into the temperature on Celsius scale.
7. What do you mean by lower and upper fixed points?
8. Define Specific heat.
9. Normal human body temperature is 98 oF. Convert it into Celsius scale and Kelvin scale.

10. Differentiate between freezing and melting point.
11. Define vaporization.
12. What is the effect of temperature on evaporation?
13. What is meant by evaporation?
14. Define co-efficient of volume thermal expansion.

UNDERSTANDING BASED QUESTION.35%

1. Why does heat flow from hot body to cold body?
2. How specific heat differs from heat capacity?

APPLICATION BASED QUESTIONS.15%

1. Give two uses of cooling affect by evaporation.
2. How evaporation differ from vaporation.
3. Why gaps are left in railway track?
4. Write two uses of bimetallic strip.

LONG QUESTIONS.

1. What is meant by evaporation? On what factors the evaporation of a liquid depends? Explain how cooling is produced by evaporation.
2. Explain the volumetric thermal expansion.
3. Define linear thermal expansion in solids. Derive a mathematical relation for linear thermal expansion. Define coefficient of linear thermal expansion from this equation.

PROBLEM: 8.2, 8.3,8.4,8.5,8.6, 8.7, 8.9

UNIT NO.9 TRANSFER OF HEAT.

KNOWLEDGE BASED QUESTIONS.50%

1. What do ou mean by transfer of heat?
2. Write the names of methods of transfer of heat.
3. What do you mean by conduction of heat?
4. Define the rate of flow of heat.
5. Define thermal conductivity. What is its mathematical formula?
6. Difference between conductors and non- conductors.
7. Define convection.
8. Write down two uses of convection currents.
9. What is meant by land breeze?
10. Define Radiation.
11. Write two consequences of radiation.
12. Difference between land breeze and sea breez?

UNDERSTANDING BASED QUESTIONS.35%

1. What causes a glider to remain in air?
2. Why bottom of cooking pots are made black?
3. Why we wear while or light coloured clothes in summer?

APPLICATION BASED QUESTIONS.15%

1. Is metals are good conductor of heat.
2. Why conduction of heat does not take place in gasses?

LONG QUESTIONS.

1. Define Specific heat. How would you find the specific heat of solid?
2. What is greenhouse effect?
3. Explain the impact of greenhouse effect in global warming.